

# STAGE AMPLIFIER SA-300

## SERVICE NOTES *Issued by RJA*

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#### Revise Information

- p. 23, 3. **Volume Test**, step 3: changed inspection order



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# CAUTIONARY NOTES

## PARTS LIST

Due to one or more of the following reasons, parts with parts code \*\*\*\*\* cannot be supplied as service parts.

- Part supplied only as a component in a complete assembly
- Copyright does not permit the part to be supplied
- Part is sold commercially

## CIRCUIT BOARD

NIU meant that "NOT IN USE " there don't set any contents in the Circuit Diagram.

There has silk-screen only in the Circuit Board.

## SPECIFICATIONS

### SA-300

#### Rated Power Output

350 W (75 W x 2 + SUBWOOFER 200 W)

#### Nominal Input Level (1 kHz)

INPUT (MIC): -50 dBu

INPUT (PHONE): -20 dBu

INPUT (RCA): -20 dBu

STEREO LINK INPUT: 0 dBu

#### Nominal Output Level (1 kHz)

LINE OUT: +4 dBu

BALANCED OUT: +4 dBu

STEREO LINK OUTPUT: 0 dBu

\* 0 dBu = 0.775 Vrms

#### Speakers

16 cm + Tweeter (Coaxial, 2-way) x 2

6.5 inches + Tweeter (Coaxial, 2-way) x 2

#### Controls

[Channel Controls]

CH1, CH2

INPUT SELECT Button (MIC/LINE)  
 VOICE ENHANCER Button  
 Channel VOLUME Knob  
 REVERB/DELAY Knob  
 ANTI-FEEDBACK Button (ON/OFF)  
 ANTI-FEEDBACK SWEEP Button

CH3, CH4

INPUT SELECT Button (MIC/LINE)  
 Channel VOLUME Knob  
 REVERB Knob  
 PHANTOM Switch

[Master Controls]

Equalizer

LOW Knob  
 MIDDLE Knob  
 HIGH Knob

LOW BOOST Button

WIDE Button

MASTER VOLUME Knob

PHONES VOLUME Knob

POWER Switch  
 GND LIFT Switch

#### Indicators

MIC/LINE (CH1--CH4)  
 ANTI-FEEDBACK ON/OFF (CH1, CH2)  
 ANTI-FEEDBACK SWEEP (CH1, CH2)  
 LEVEL METER  
 SUBWOOFER ACTIVE

#### Connectors

CH1, CH2

MIC INPUT Jacks (XLR type, 1/4" TRS phone type)  
 LINE INPUT Jacks (L/MONO, R) (1/4" phone type)

CH3, CH4

MIC INPUT Jacks (XLR type, 1/4" TRS phone type,  
 PHANTOM Power)  
 LINE INPUT Jacks (L/MONO, R) (1/4" phone type)  
 LINE INPUT Jacks (L, R) (RCA phono type)

Output

LINE OUTPUT Jacks (L/MONO, R) (1/4" phone type)  
 LINE OUTPUT Jacks (L, R) (XLR type)

Stereo Link

STEREO LINK IN Jack (1/4" phone type)  
 STEREO LINK OUT Jacks (L, R) (1/4" phone type)

Others

PHONES Jack (Stereo 1/4" phone type)  
 SUBWOOFER OUT Jack (1/4" phone type)  
 Foot SW Jacks (ANTI-FEEDBACK SWEEP)  
 (1/4" phone type)  
 Foot SW Jack (EXP PEDAL / REMOTE SW)  
 (1/4" TRS phone type)

#### Power Supply

AC 117 V, AC 220 V, AC 230 V, AC 240 V (50/60 Hz)

#### Power Consumption

94 W

#### Dimensions

456 (W) x 343 (D) x 297 (H) mm

18 (W) x 13-9/16 (D) x 11-3/4 (H) inches

#### Weight

11.5 kg / 25 lbs 6 oz

### SA-300W (SUBWOOFER)

#### Speaker

30 cm / 12 inches

#### Nominal Impedance

4 ohms

#### Connection

INPUT Jack (1/4" phone type)

#### Dimensions

456 (W) x 325 (D) x 510 (H) mm

18 (W) x 12-13/16 (D) x 20-1/8 (H) inches

#### Weight

10.5 kg / 23 lbs 3 oz

**Accessories**

Owner's Manual ENGLISH(#SD000706)  
JAPANESE(#SD000705)

Speaker Connection Cable(#SD000775)

**Option**

Foot Switch:

BOSS FS-5L (Mute)  
BOSS FS-5U (ANTI-FEEDBACK / Effect)  
BOSS FS-6

Expression Pedal:

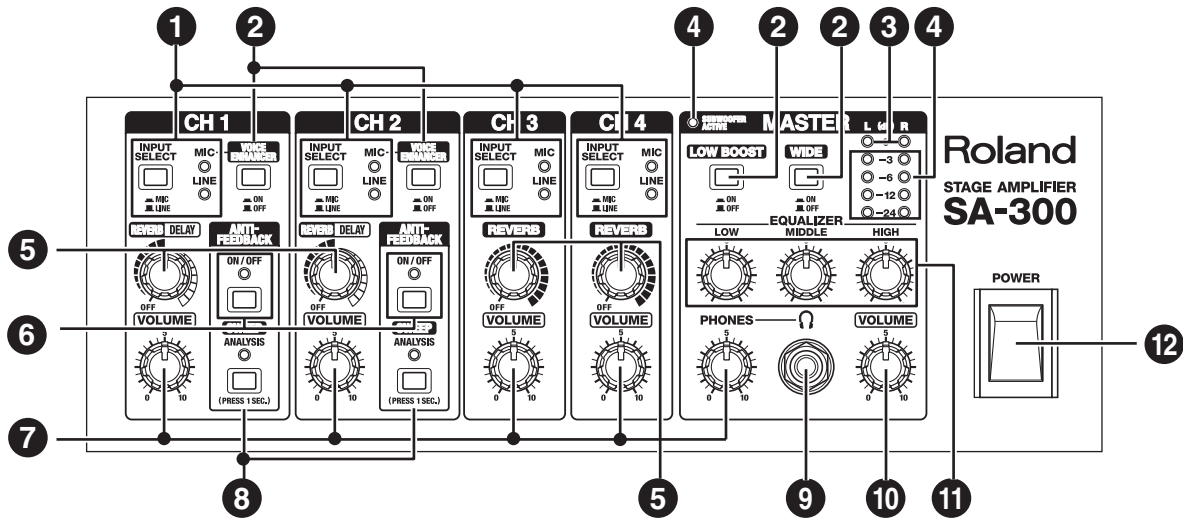
EV-5  
BOSS FV-300L  
BOSS FV-500L  
BOSS FV-500H

Connection Cable: PCS-31

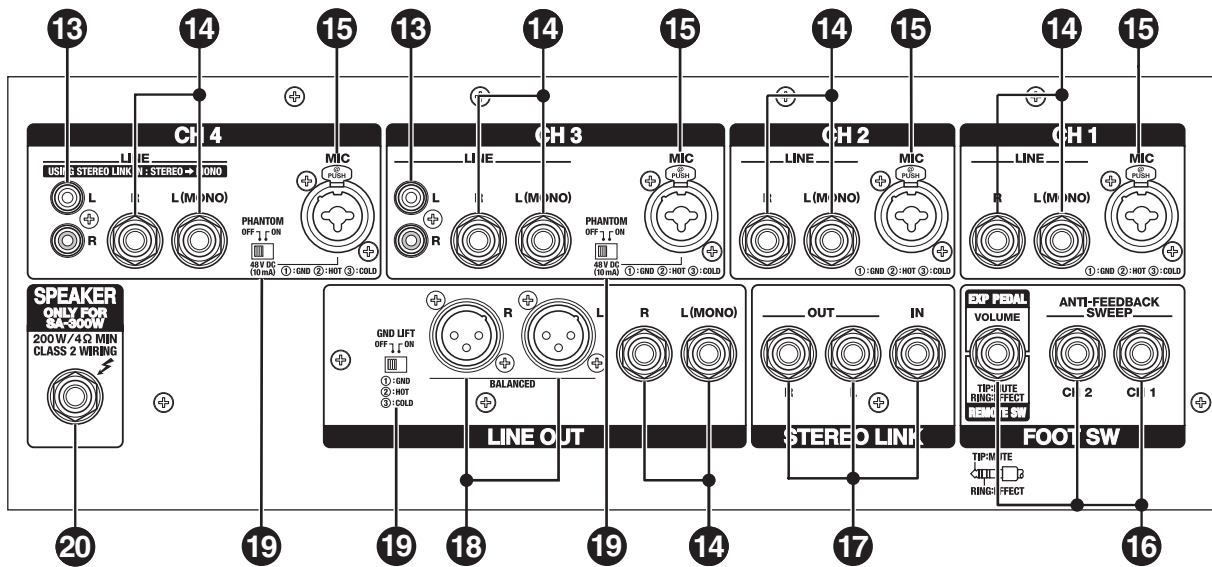
In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

# LOCATION OF CONTROLS

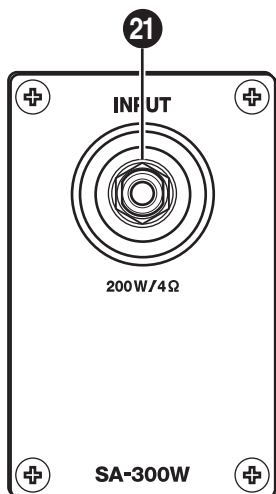
[TOP]



[REAR]



[SUBWOOFER]



# LOCATION OF CONTROLS PARTS LIST

## [TOP]

No	PART CODE	CATEGORY	PART NAME	DESCRIPTION	Q'TY
1	SD000044	DIODE	LED GREEN	L-34 GDSDL	4
	SD000045	DIODE	LED RED	L-34HDSL	4
	SD000082	KNOB,BUTTON	PUSH BUTTON		4
	SD000099	SWITCH	PUSH SWITCH	ESB64619	4
2	SD000082	KNOB,BUTTON	PUSH BUTTON		4
	SD000099	SWITCH	PUSH SWITCH	ESB64619	4
3	SD000045	DIODE	LED RED	L-34HDSL	2
4	SD000044	DIODE	LED GREEN	L-34 GDSDL	9
5	SD000091	POTENTIOMETER	POTENTIOMETER	RK09L1140 10KB	4
	SD000083	KNOB,BUTTON	KNOB S		4
	17048630	SCREWS	VR ACCESSORY NUT M9		4
	SD000107	SCREWS	VR ACCESSORY WASHER M9(T0.3)		4
6	SD000045	DIODE	LED RED	L-34HDSL	2
	SD000082	KNOB,BUTTON	PUSH BUTTON		2
	SD000099	SWITCH	PUSH SWITCH	ESB64619	2
7	SD000743	POTENTIOMETER	POTENTIOMETER	RK09L12D0A1V 10KB X 2	5
	SD000083	KNOB,BUTTON	KNOB S		5
	17048630	SCREWS	VR ACCESSORY NUT M9		5
	SD000107	SCREWS	VR ACCESSORY WASHER M9(T0.3)		5
8	01454723	SWITCH	PUSH SWITCH	ESB64620	2
	SD000714	KNOB,BUTTON	PUSH BUTTON	RED	2
	SD000045	DIODE	LED RED	L-34HDSL	2
9	13449145	JACK,EXT TERMINAL	6.5MM JACK	YKB21-5010	1
	22150756	SCREWS	JACK NUT 2	PLASTIC/BLK	1
10	SD000090	POTENTIOMETER	POTENTIOMETER	RK0971410 10KBX4	1
	SD000083	KNOB,BUTTON	KNOB S		1
	40128923	SCREWS	HEX NUT M7		1
	SD000107	SCREWS	VR ACCESSORY WASHER M7	M7X12X0.5 NO.476	1
11	SD000727	POTENTIOMETER	POTENTIOMETER CENTER CLICK	RK09L1140 CC 10KB	3
	SD000083	KNOB,BUTTON	KNOB S		3
	17048630	SCREWS	VR ACCESSORY NUT M9		3
	SD000107	SCREWS	VR ACCESSORY WASHER M9(T0.3)		3
12	03782367	SWITCH	SEESAW SWITCH	JW-L11RKK	1
	03782323	MISCELLANEOUS	SW HOLDER	AT-218K	1

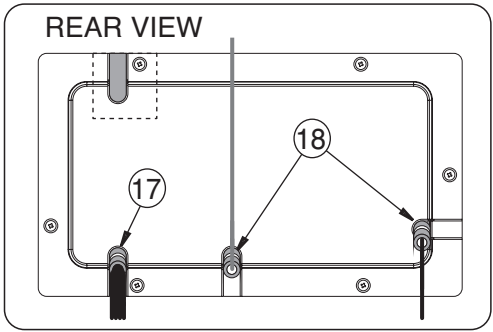
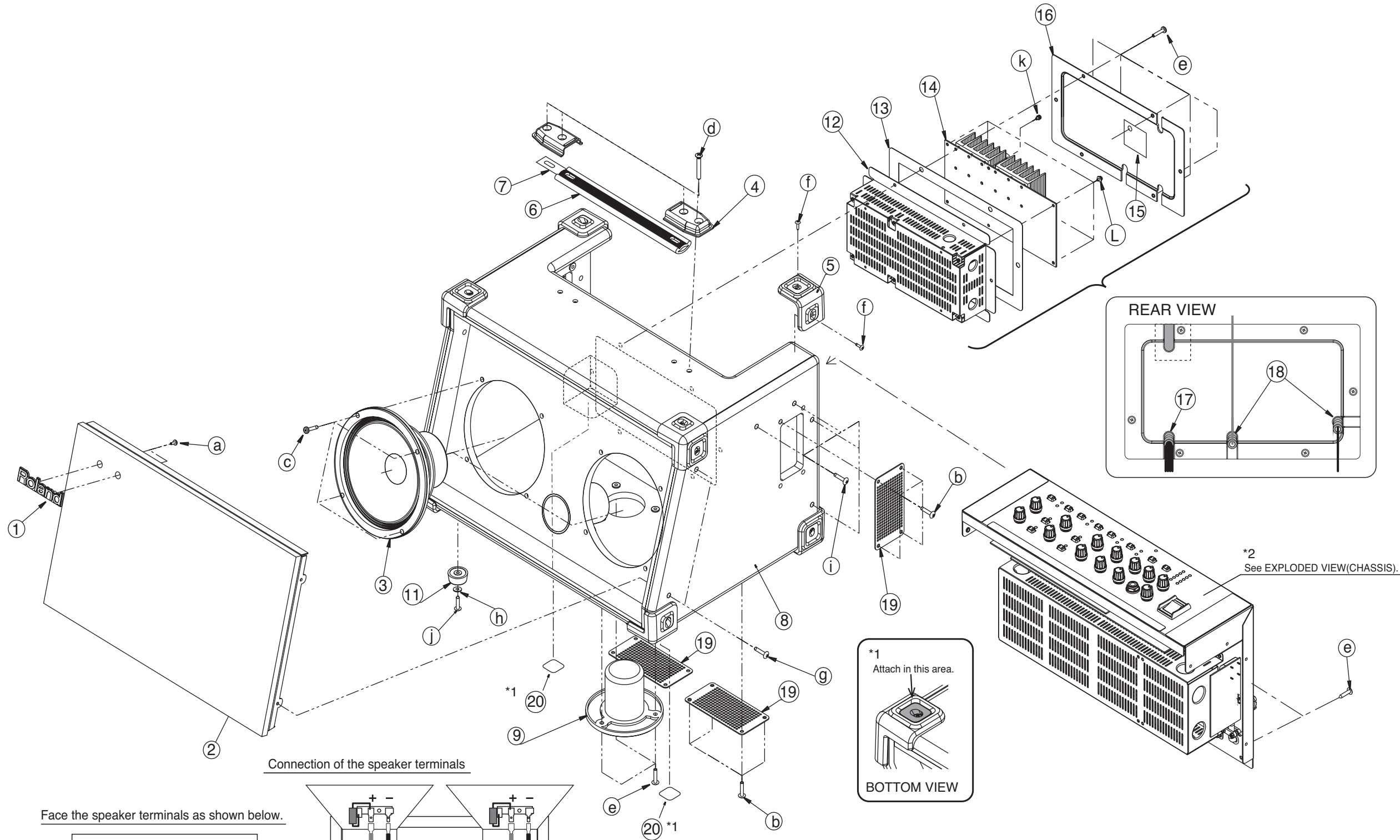
## [REAR]

No	PART CODE	CATEGORY	PART NAME	DESCRIPTION	Q'TY
13	13449643	JACK,EXT TERMINAL	JACK (PIN JACK 2P) WHT/RED	YKC21-3091	2
	40011312	SCREWS	SCREW 3X8	BINDING TAPTITE P BZC	2
14	13449146	JACK,EXT TERMINAL	6.5MM JACK	YKB21-5012 (W/SW)	10
	22150756	SCREWS	JACK NUT 2	PLASTIC/BLK	10
15	01901001	JACK,EXT TERMINAL	XLR CONNECTER	NCJ9FI-H	4
	40011312	SCREWS	SCREW 3X8	BINDING TAPATITE P BZC	8
16	13449145	JACK,EXT TERMINAL	6.5MM JACK	YKB21-5010	3
	22150756	SCREWS	JACK NUT 2	PLASTIC/BLK	3
17	13449252	JACK,EXT TERMINAL	6.5MM JACK	YKB21-5006 (STEREO W/SW)	3
	22150756	SCREWS	JACK NUT 2	PLASTIC/BLK	3
18	00122123	JACK,EXT TERMINAL	XLR CONNECTER	YKF52-5003	2
	40011312	SCREWS	SCREW 3X8	BINDING TAPTITE P BZC	4
19	03568145	SWITCH	SLIDE SWITCH	SSAA120200	3
20	SD000175	JACK,EXT TERMINAL	JACK	S2 BBB PC-C KINKED	1
	SD000484	JACK NUT	S2 BNB		1

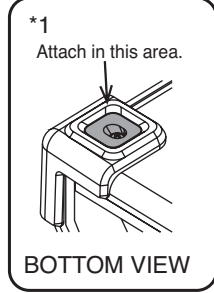
## [SUBWOOFER]

No	PART CODE	CATEGORY	PART NAME	DESCRIPTION	Q'TY
21	SD000736	JACK,EXT TERMINAL	6.5 MM JACK	S2/BNB	1
	SD000484	JACK NUT	S2 BNB		1

# EXPLODED VIEW(CABINET)

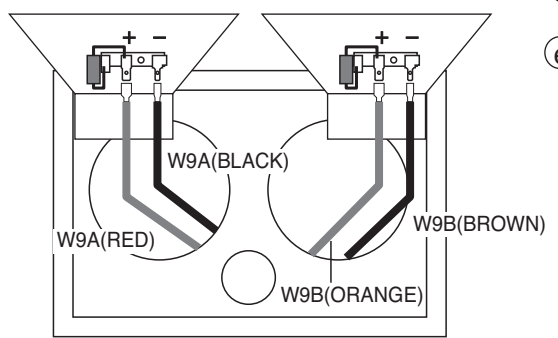
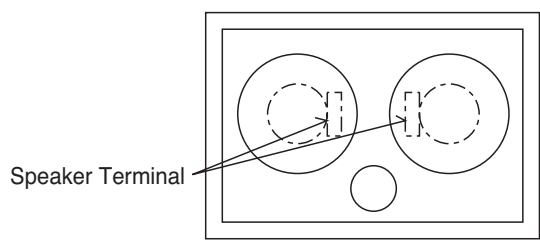


\*2 See EXPLODED VIEW(CHASSIS).



Connection of the speaker terminals

Face the speaker terminals as shown below.



## EXPLODED VIEW PARTS LIST(CABINET)

### [Parts]

No	PART CODE	PART NAME	DISCRIPTION	Q'TY
1	SD000719	BADGE	LOGO	1
2	SD000722	GRILL S ASSY		1
3	SD000711	SPEAKER 6' 1/2 (8OHM)		2
4	SD000463	HANDLE HOLDER		1
5	SD000776	CORNER PROTECTOR		8
6	SD000461	HANDLE RUBBER		1
7	SD000462	HANDLE PLATE		1
8	SD000712	CABINET S ASSY		1
9	SD000732	STAND HOLDER		1
11	SD000716	FOOT		4
12	SD000744	AMP CHASSIS		1
13	SD000752	AMP CHASSIS CUSHION		1
14	SD000203	AMP BOARD ASSY		1
15	SD000869	AMP CHASSIS COVER CUSHION		1
16	SD000724	CHASSIS COVER		1
17	SD000870	CUSHION 34X80	T=1.0	1
18	SD000871	CUSHION 34X120	T=1.0	2
19	SD000713	RADIATION PLATE		4
20	SD000872	CORNER CUSHION		2

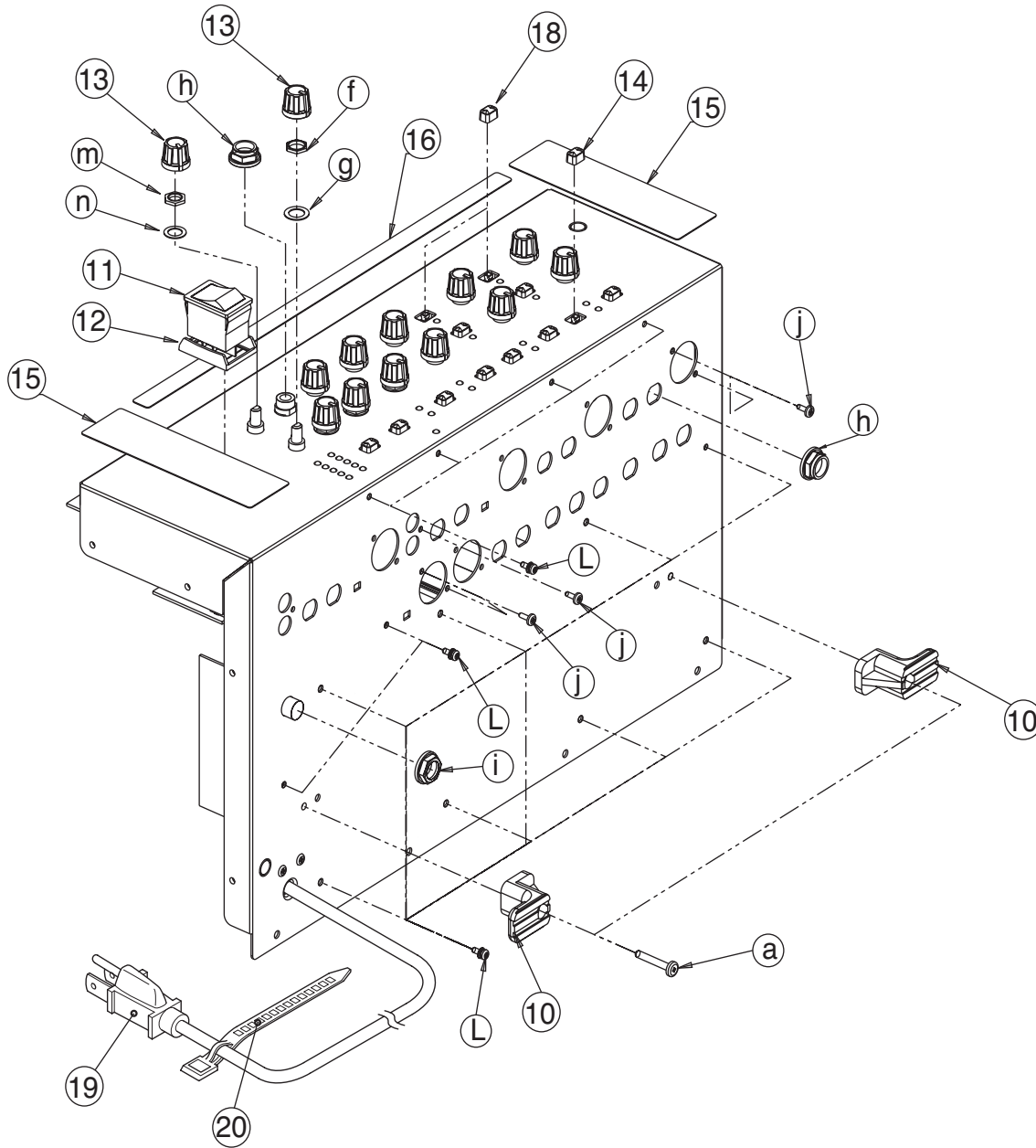
### [Screws]

No	PART CODE	PART NAME	DISCRIPTION	Q'TY
a	40011312	SCREW 3X8	BINDING TAPTITE P BZC	2
b	40010112	SCREW M4X12	TRUSS MACHINE BZC	16
c	40010367	SCREW M4X25	BINDING MACHINE BZC	8
d	SD000737	SCREW M5X20	OVALHEAD MACHINE BZC	4
e	40010134	SCREW M4X20	TRUSS MACHINE BZC	13
f	SD000749	SCREW M3X12	TRUSS TAPTITE A1 BZC	16
g	40010545	SCREW M4X25	TRUSS HEAD SPECIAL FE BZC	4
h	SD000430	PLANE WASHER	D11 D4.1 T1 BLACK	4
i	40010534	SCREW M4X20	SPECIAL TRUSS BZC	8
j	40010667	SCREW M4X16	TRUSS TAPPING-A FE BZC	4
k	40013067	SCREW M3X8	PAN MACHINE W/SW+SMALL PW ZC	1
L	40012867	SCREW M3X8	PAN MACHINE W/SW+PW ZC	5





# EXPLODED VIEW(CHASSIS 1)



## EXPLODED VIEW PARTS LIST(CHASSIS 1)

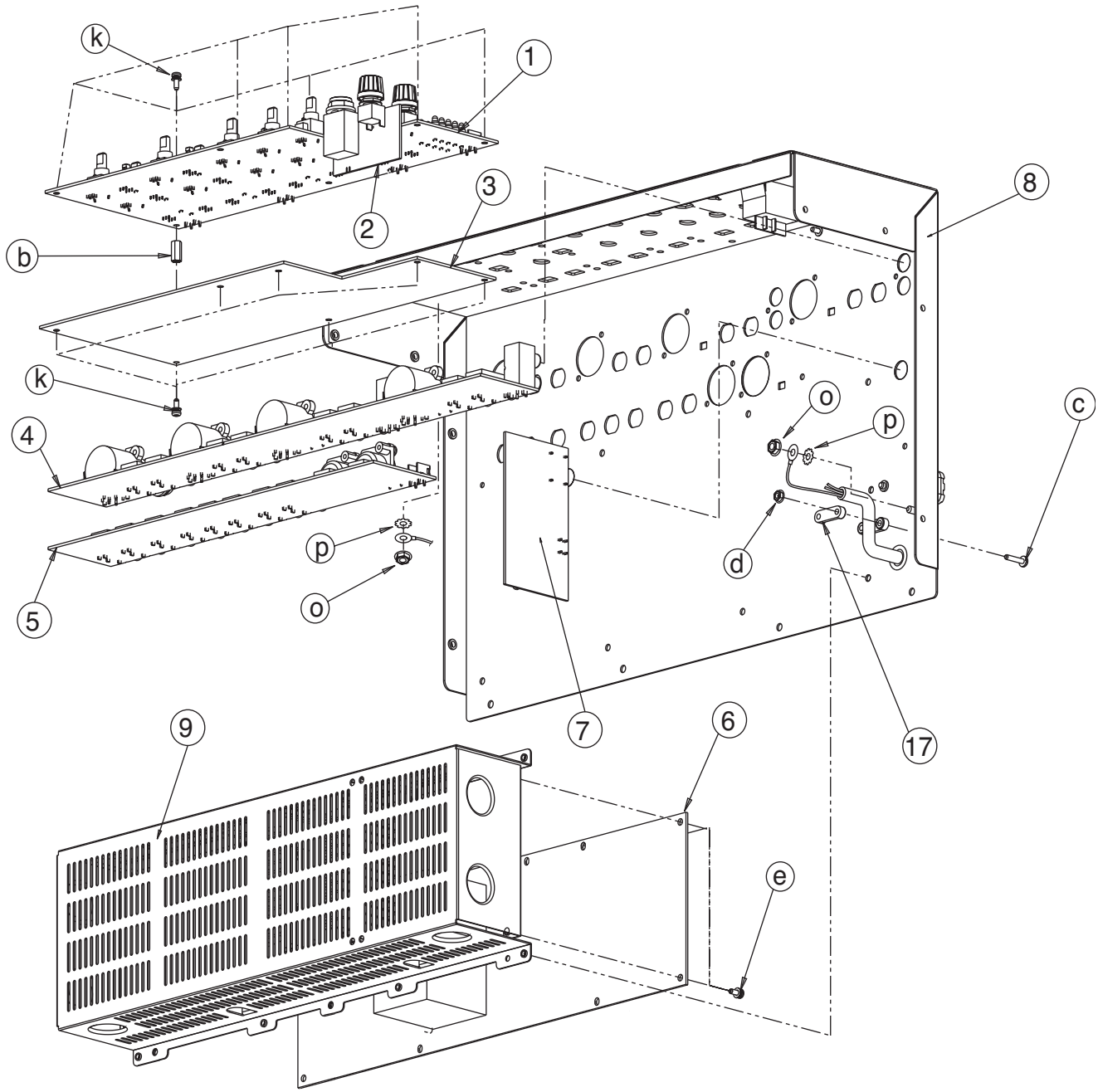
### [Parts]

No	PART CODE	PART NAME	DISCRIPTION	Q'TY
10	22360705	CORD HOOK		2
11	03782367	SEESAW SWITCH	JW-L11RKK	1
12	03782323	SW HOLDER	AT-218K	1
13	SD000083	KNOB S		13
14	SD000082	PUSH BUTTON		10
15	SD000734	EVA PACKING	125 X 35 X 0.5T	2
16	SD000742	EVA PACKING	320 X 8 X 0.5T	1
18	SD000714	PUSH BUTTON	RED	2
19	SD000178	AC CORD	SP-301 WITH TERMINAL 117V	1
	SD000176	AC CORD	SP-023 WITH TERMINAL 230V	1
	SD000180	AC CORD	SP-60 WITH TERMINAL 230VE	1
	SD000179	AC CORD	SP-502B WITH TERMINAL 240V	1
20	SD000266	AC CORD BAND (BLACK)		1

### [Screws]

No	PART CODE	PART NAME	DISCRIPTION	Q'TY
a	SD000103	SCREW M4X25	PAN MACHINE W/SW BZC	2
f	17048630	VR ACCESSORY NUT M9		12
g	SD000107	VR ACCESSORY WASHER M9(T0.3)		12
h	22150756	JACK NUT 2	PLASTIC/BLK	17
i	SD000484	JACK NUT	S2 BNB	1
j	40011312	SCREW 3X8	BINDING TAPTITE P BZC	14
L	40012956	SCREW M3X8	PAN MACHINE W/SW+PW FE BZC	14
m	40128923	HEX NUT M7		1
n	17048651	VR ACCESSORY WASHER M7	M7X12X0.5 NO.476	1

# EXPLODED VIEW(CHASSIS 2)



## EXPLODED VIEW PARTS LIST(CHASSIS 2)

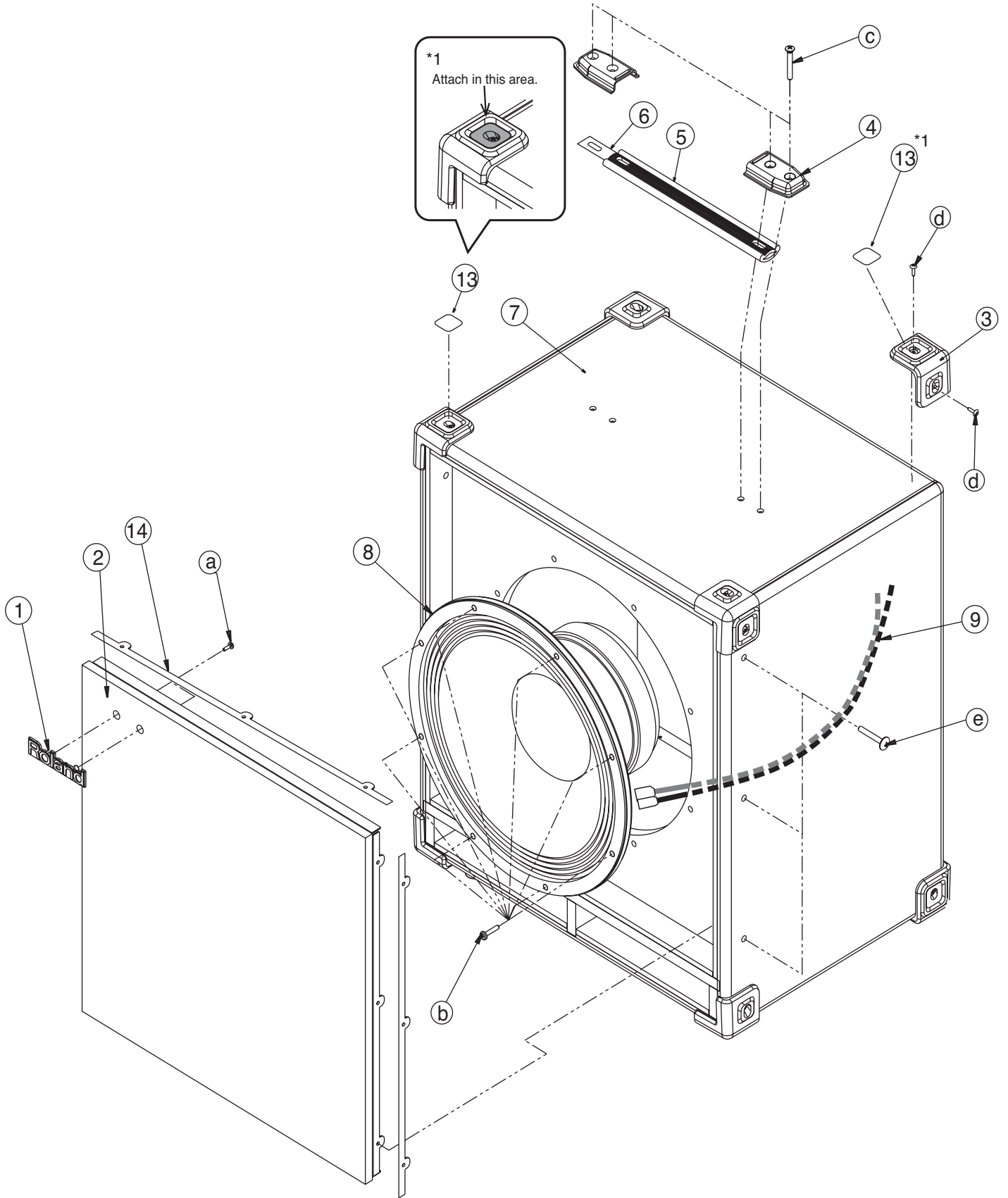
### [Parts]

No	PART CODE	PART NAME	DISCRIPTION	Q'TY
1	SD000200	MAIN SHEET ASSY	(PANEL BOARD)	1
2	SD000200	MAIN SHEET ASSY	(PHO BOARD)	1
3	SD000200	MAIN SHEET ASSY	(MAIN BOARD)	1
4	SD000217	JACK SHEET ASSY	(IN BOARD)	1
5	SD000217	JACK SHEET ASSY	(OUT BOARD)	1
6	SD000205	PS BOARD ASSY 117V		1
	SD000206	PS BOARD ASSY 230V		1
	SD000207	PS BOARD ASSY 240V		1
7	SD000217	JACK SHEET ASSY	(PRI BOARD)	1
8	SD000733	CHASSIS		1
9	SD000717	POWER CHASSIS		1
17	12369410RT	AC CORD HOLDER	1702B	2

### [Screws]

No	PART CODE	PART NAME	DISCRIPTION	Q'TY
b	SD000756	STAND OFF	M3 L=12	7
c	40010301	SCREW M3X20	BINDING MACHINE BZC	2
d	40011756	FLANGE HEX NUT M3	ZC	2
e	40013067	SCREW M3X8	PAN MACHINE W/SW+SMALL PW ZC	9
k	40012867	SCREW M3X8	PAN MACHINE W/SW+PW ZC	14
o	40011767	FLANGE HEX NUT M4	FE ZC	2
p	40011889	EXTERNAL TOOTH WASHER M4	FECM	2

# EXPLODED VIEW(SUB WOOFER)



## EEXPLODED VIEW PARTS LIST(SUB WOOFER)

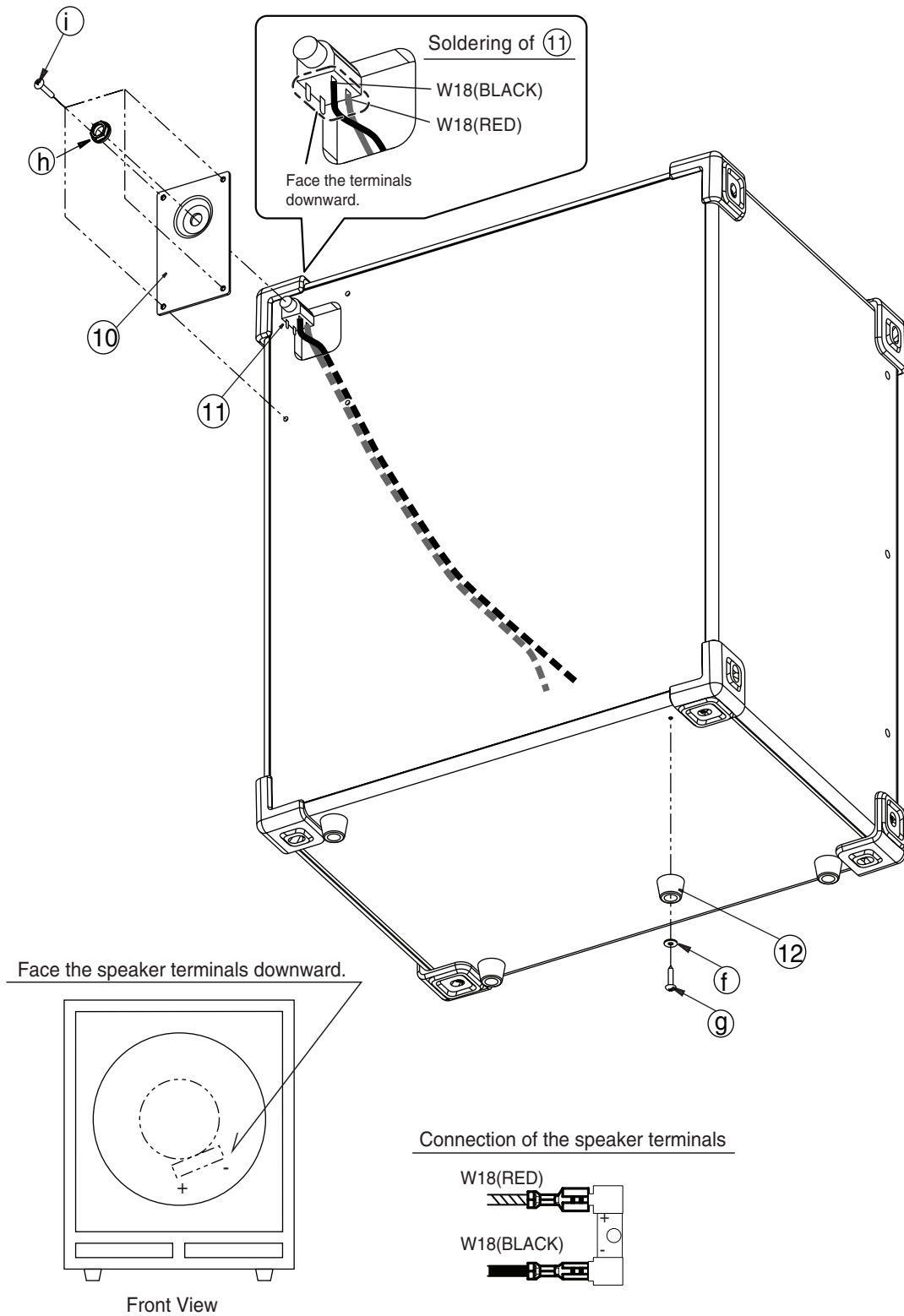
### [Parts]

No	PART CODE	PART NAME	DISCRIPTION	Q'TY
1	SD000719	BADGE	LOGO	1
2	SD000764	GRILL L ASSY		1
3	SD000776	CORNER PROTECTOR		8
4	SD000463	HANDLE HOLDER		2
5	SD000461	HANDLE RUBBER		1
6	SD000462	HANDLE PLATE		1
7	SD000741	CABINET L ASSY		1
8	SD000738	SPEAKER 12' (4OHM)		1
9	SD000768	WIRING W18	(2P)	1
13	SD000872	CONER CUSHION		2
14	SD000873	GRILL CUSHION		4

### [Screws]

No	PART CODE	PART NAME	DISCRIPTION	Q'TY
a	40011312	SCREW 3X8	BINDING TAPTITE P BZC	2
b	40010367	SCREW M4X25	BINDING MACHINE BZC	8
c	SD000737	SCREW M5X20	OVALHEAD MACHINE BZC	4
d	SD000749	SCREW M3X12	TRUSS TAPTITE A1 BZC	16
e	40010545	SCREW M4X25	TRUSS HEAD SPECIAL FE BZC	6

# EXPLODED VIEW(SUB WOOFER)



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**EXPLODED VIEW PARTS LIST(SUB WOOFER)**

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**[Parts]**

No	PART CODE	PART NAME	DISCRIPTION	Q'TY
10	SD000758	JACK PLATE		1
11	SD000736	6.5 MM JACK	S2/BNB	1
12	SD000716	FOOT		4

**[Screws]**

No	PART CODE	PART NAME	DISCRIPTION	Q'TY
f	SD000430	PLANE WASHER	D11 D4.1 T1 BLACK	4
g	40010667	SCREW M4X16	TRUSS TAPPING-A FE BZC	4
h	SD000484	JACK NUT	S2 BNB	1
i	40010134	SCREW M4X20	TRUSS MACHINE BZC	4



# PARTS LIST

**SAFETY PRECAUTIONS:**  
The parts marked  $\Delta$  have safety-related characteristics. Use only listed parts for replacement.

Due to one or more of the following reasons, parts with parts code \*\*\*\*\* cannot be supplied as service parts.

- Part supplied only as a component in a complete assembly
- Copyright does not permit the part to be supplied
- Part is sold commercially

NOTE: The parts marked # are new. (initial parts) The description "Q'TY" means a necessary number of the parts per one product.

## CASING

#	SD000719	BADGE	LOGO		2
#	SD000741	CABINET L ASSY		SA-300W SUBWOOFER	1
#	SD000712	CABINET S ASSY			1
	$\Delta$ 22360705	CORD HOOK			2
#	SD000776	CORNER PROTECTOR			16
#	SD000716	FOOT			8
#	SD000764	GRILL L ASSY		SA-300W SUBWOOFER	1
#	SD000722	GRILL S ASSY			1
	$\Delta$ SD000463	HANDLE HOLDER			4
	$\Delta$ SD000462	HANDLE PLATE			2
	$\Delta$ SD000461	HANDLE RUBBER			2
#	SD000732	STAND HOLDER			1

## CHASSIS

#	SD000744	AMP CHASSIS			1
#	SD000733	CHASSIS			1
#	SD000724	CHASSIS COVER			1
#	$\Delta$ SD000758	JACK PLATE		SA-300W SUBWOOFER	1
#	SD000717	POWER CHASSIS			1
#	$\Delta$ SD000713	RADIATION PLATE			4

## KNOB,BUTTON

#	SD000714	PUSH BUTTON	RED		2
	SD000083	KNOB S			13
	SD000082	PUSH BUTTON			10

## SWITCH

	$\Delta$ 03568145	SLIDE SWITCH	SSAA120200		3
	03782367	SEESAW SWITCH	JW-L11RKK		1
	01454723	PUSH SWITCH	ESB64620	PSW8,PSW9	2
	SD000099	PUSH SWITCH	ESB64619	PSW1,PSW2,PSW3,PSW4,PSW5,PSW6,PSW7,PSW10,PSW11,PSW12	10

## JACK,EXT TERMINAL

	00122123	XLR CONNECTER	YKF52-5003	JK24,JK23	2
	13449643	JACK (PIN JACK 2P) WHT/RED	YKC21-3091	JK10,JK14	2
	13449146	6.5MM JACK	YKB21-5012 (W/SW)	JK2,JK3,JK5,JK6,JK8,JK9,JK12,JK13,JK21,JK22 ON JACK	10
	13449145	6.5MM JACK	YKB21-5010	JK15,JK16,JK17,JK26 ON JACK	4
	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)	JK18,JK19,JK20 ON JACK	3
#	$\Delta$ SD000736	6.5 MM JACK	S2/BNB	SA-300W JACK PLATE	1
	$\Delta$ SD000175	JACK	S2 BBB PC-C KINKED	JK25 ON JACK	1
	01901001	XLR CONNECTER	NCJ9FI-H	JK1,JK4,JK7,JK11	4

## SPEAKER, BUZZER

#	$\Delta$ SD000711	SPEAKER 6' 1/2 (8OHM)			2
#	$\Delta$ SD000738	SPEAKER 12' (4OHM)		SA-300W SUBWOOFER	1

## PWB ASSY

#	$\Delta$ SD000217	JACK SHEET ASSY	INC. PRI&INPUT&OUTPUT BOARD		1
#	$\Delta$ SD000200	MAIN SHEET ASSY	INC. PANEL BOARD		1
#	$\Delta$ SD000203	AMP BOARD ASSY			1
#	$\Delta$ SD000205	PS BOARD ASSY 117V			1
#	$\Delta$ SD000206	PS BOARD ASSY 230V			1
#	$\Delta$ SD000207	PS BOARD ASSY 240V			1

<b>IC</b>						
		02563467	NJM2374AM-TE1	IC (SWITCHING REGULATOR)	IC13	1
		03015923	S-80130ANMC	IC (RESET)	IC4	1
	△	01678512	UPC2933T-T2	IC (REGULATOR)	IC12,IC40	2
#	△	<del>SD000735</del>	<del>UPD230N15T1B</del>	IC (REGULATOR)	IC39	1
#	SD000882	SD000725	74HC4052PW	IC (MULTIPLEXER)	IC11	1
		03237689	M12L64164A-7T	IC (MEMORY DRAM)	IC3	1
		02453056	BU2090FS-E2	IC (LED DRIVER)	IC9,IC37	2
#		03890134	TC7WU04FK	IC (GATE)	IC42	1
#		03679367	T6TZ3AFG-0001	IC (DSP)	IC2	1
#		03901590	HD64F3024	IC (CPU)	IC1	1
		03013778	UPC4570G2-E2/JM (PB FREE)	IC (BIPOLAR OP)	IC14,IC15,IC16,IC17,IC20,IC21,IC22,IC23,IC25,IC33,IC34,IC35,IC36,IC38	14
		15189261	M5218AFP-600E	IC (BIPOLAR OP AMP)	IC29,IC30,IC31	3
		00346445	NJM2100M(TE3)	IC (BIPOLAR OP AMP)	IC18,IC19,IC27,IC28	4
		01125012	NJM4556AM	IC (BIPOLAR OP AMP)	IC32	1
		02451434	AK4552VT	IC (AD/DA)	IC5,IC6,IC7,IC8	4
<b>TRANSISTOR</b>						
		15309104	2SA1586-GR(TE85R)	TRANSISTOR	Q1,Q4,Q5,Q12,Q22,Q24,Q26,Q39,Q73,Q81,Q82	11
		15319107	2SC4116-GR(TE85R)	TRANSISTOR	Q6,Q7,Q8,Q10,Q11,Q13,Q14,Q25,Q28,Q29,Q30,Q31,Q41,Q42,Q43,Q44,Q60,Q61,Q72,Q74,Q79	21
		15329103T0	2SK880-GR(TE85R)	FET	Q9,Q15,Q18,Q19,Q20,Q23,Q27,Q32,Q33,Q40,Q47,Q51,Q75,Q76,Q77,Q92	16
<b>DIODE</b>						
		SD000045	L-34HDSL	LED RED	LED1,LED3,LED4,LED6,LED7,LED9,LED16,LED21,LED22,LED23	10
		SD000044	L-34GDSL	LED GREEN	LED2,LED5,LED8,LED10,LED11,LED12,LED13,LED14,LED15,LED17,LED18,LED19,LED20	13
<b>RESISTOR</b>						
#		SD000748	6.8K OHM 1/2W	RESISTOR	R2,R3,R18,R19 ON JACK	4
		00567323	RPC05T 223 J	MTL.FILM RESISTOR	R118,R51	2
#	△	SD000754	RSS 1/2 W 0.22 OHM	METAL OXIDE REGISTER	R165	1
		15399926	MCR50-101J	CHIP RESISTOR	R248,R255	2
	△	13749189	SR50TR 101 J (1/2W)	CARBON RESISTOR	R33,R37,R40,R44 ON JACK	4
	△	03017312	SR50TR 223 J 1/2W 22K OHM	CARBON RESISTOR	R68,R61 ON JACK	2
<b>POTENTIOMETER</b>						
#		SD000727	RK09L1140 CC 10KB	POTENTIOMETER CENTER CLICK	VR9,VR10,VR11	3
		SD000090	RK0971410 10KBX4	POTENTIOMETER	VR12	1
		SD000091	RK09L1140 10KB	POTENTIOMETER	VR5,VR6,VR7,VR8	4
#		SD000743	RK09L12D0A1V 10KB X 2	POTENTIOMETER	VR1,VR2,VR3,VR4,VR13	5
<b>CAPACITOR</b>						
#	△	SD000728	100 / 16 105C	ELECTROLYTIC CAPACITER	C168	1
#	△	SD000759	100 / 63 105C	ELECTROLYTIC CAPACITER	C170	1
#	△	SD000747	47 / 63 105C	ELECTROLYTIC CAPACITER	C169	1
<b>INDUCTOR&amp;ACOIL&amp;AFILTER</b>						
#	△	SD000761	RH12 X15 X 7.3	FERRITE-CORE		3
#	△	SD000753	BLM21G102SN1	EMI FILTER	L13,L14,L19,L20,L49,L50,L56	7
#	△	SD000746	DR808-151K	COIL	L24	1
	△	02780378	ELL6SH2R7M	CHOKE COIL	L23	1
<b>CRYSTAL&amp;ARESONATOR</b>						
#		03902878	CX-49G 16.9344MHZ	CRYSTAL	X2	1
		02893934	CX-49G 20.000MHZ	CRYSTAL	X1	1
<b>CONNECTOR</b>						
	△	13369724	B2P-VH 7A /250V	CONNECTOR	CN6 on PRI	3
	△	13369898	B2P3-VH 7A /250V	CONNECTOR	CN5 on PRI	1
<b>WIRING, CABLE</b>						
#		SD000731	WIRING W4	(9P)	OUT- WP6 to MAIN-CN6	1

**WIRING, CABLE**

#		SD000710	WIRING W1	(7P)	MAIN-WP1 to IN-CN1 MAIN-WP2 to IN-CN2	2
#		SD000720	WIRING W3	(7P)	OUT-WP5 to MAIN-CN5, OUT-WP7 to MAIN-CN7	2
#		SD000740	WIRING W5	(4P)	MAIN-WP9 to MAIN-WP10	1
#	△	SD000757	WIRING W14	(3P)	PS-CN904 to W15	1
#	△	SD000766	WIRING W15	(3P)	W14 to AMP-CN5	1
#		SD000772	WIRING W20	(12P)	PHO-WP11 to MAIN CN16	1
#		SD000765	WIRING W21	(7P)		1
#		SD000770	WIRING W22	(9P)	MAIN-WP21 to PANEL-CN24	1
#	△	SD000768	WIRING W18	(2P)	SA-300W SUBWOOFER	1
#		SD000729	WIRING W6	(2P)	PRI-WP8 to MAIN-CN8	1
#	△	SD000762	WIRING W9C	(2P YEL/PUR)	AMP-CN6 to PRI CN6	1
#	△	SD000745	WIRING W9A	(2P RED/BLK)	AMP-CN1 to SP L	1
#	△	SD000750	WIRING W9B	(2P ORG/BRW)	AMP-CN2 to SP R	1
#	△	SD000771	WIRING W17	(2P BROWN)	PRI-CN5 to PS-CN901 (230/240V ONLY)	1
#	△	SD000774	WIRING W16	(2P BLACK)	PRI-CN15 to PS-CN901 (100/117V ONLY)	1
#	△	SD000715	WIRING W7	(1P)	PRI-WPS1,2 to POWER SW	2
#		SD000723	WIRING W8	(1P)	MAIN-WP5 to CHASSIS	1
#	△	SD000773	WIRING W11	(15P)	AMP-CN903 to MAIN CN16	1
#	△	SD000767	WIRING W12	(14P)	PS-CN902 to W13	1
#	△	SD000760	WIRING W13	(14P)	W12 to AMP-CN902	1
#		SD000718	WIRING W2	(12P)	MAIN-WP3 to IN-CN3 MAIN-WP3 to IN-CN3	2
#	△	SD000769	WIRING W10	(10P)	MAIN CN14 to AMP-CN3	1

**AC CORD ASSY (Installed)**

△	SD000176	SP-023 WITH TERMINAL 230V	AC CORD	1
△	SD000178	SP-301 WITH TERMINAL 117V	AC CORD	1
△	SD000179	SP-502B WITH TERMINAL 240V	AC CORD	1
△	SD000180	SP-60 WITH TERMINAL 230VE	AC CORD	1

**SCREWS**

#		40011756	FLANGE HEX NUT M3	ZC		2
		SD000749	SCREW M3X12	TRUSS TAPTITE A1 BZC		32
		40010667	SCREW M4X16	TRUSS TAPPING-A FE BZC		8
		40010134	SCREW M4X20	TRUSS MACHINE BZC		17
		40010545	SCREW M4X25	TRUSS HEAD SPECIAL FE BZC		10
		40010534	SCREW M4X20	SPECIAL TRUSS BZC		8
		SD000484	JACK NUT	S2 BNB		2
		22150756	JACK NUT 2	PLASTIC/BLK		17
		40011312	SCREW 3X8	BINDING TAPTITE P BZC		18
		SD000103	SCREW M4X25	PAN MACHINE W/SW BZC		2
		40013067	SCREW M3X8	PAN MACHINE W/SW+SMALL PW ZC		10
		40012867	SCREW M3X8	PAN MACHINE W/SW+PW ZC		19
		40012956	SCREW M3X8	PAN MACHINE W/SW+PW FE BZC		14
#		SD000737	SCREW M5X20	OVALHEAD MACHINE BZC		8
		17048651	VR ACCESSORY WASHER M7	M7X12X0.5 NO.476		1
#		SD000756	STAND OFF	M3 L=12		7
		40010112	SCREW M4X12	MACHINE TRUSS BZC		16
		40011889	EXTERNAL TOOTH WASHER M4	FECM		2
		40011767	FLANGE HEX NUT M4	FE ZC		2
		SD000430	PLANE WASHER	D11 D4.1 T1 BLACK		8
		40010301	SCREW M3X20	BINDING MACHINE BZC		2
		40010367	SCREW M4X25	BINDING MACHINE BZC		16
		40128923	HEX NUT M7			1
		17048630	VR ACCESSORY NUT M9			12
		SD000107	VR ACCESSORY WASHER M9(T0.3)			12

**PACKING**

#		SD000763	BOTTOM PAD	CARDBOARD		2
#		SD000739	TOP PAD S	CARDBOARD		2
#		SD000730	CABINET L PACKING CASE			1
#		SD000721	CABINET S PACKING CASE			1
#		SD000709	OUTER PACKING CASE			1

**MISCELLANEOUS**

△	KC60TE01	TERMINAL	PT1870502	TER1,TER2 on PRI	2
△	03782323	SW HOLDER	AT-218K		1
	SD000489	LED HOLDER	LH5-7		23
#		SD000742	EVA PACKING	320 X 8 X 0.5T	1
	△	12369410RT	AC CORD HOLDER	1702B	2
#		SD000734	EVA PACKING	125 X 35 X 0.5T	2
		SD000266	AC CORD BAND (BLACK)		1
#		SD000752	AMP CHASSIS CUSHION		1

**MISCELLANEOUS**

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#	SD000873	GRILL CUSHION		4
	SD000869	AMP CHASSIS COVER CUSHION		1
#	SD000870	CUSHION 34X80		1
#	SD000871	CUSHION 34X120		2
#	SD000872	CORNER CUSHION		4

**ACCESSORIES (Standard)**

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#	SD000706	OWNER'S MANUAL	ENGLISH		1	
#	SD000705	OWNER'S MANUAL	JAPANESE		1	
#	△	SD000775	WIRING W19	(2P)	SPEAKER CONNECTION CABLE	1

# CHECKING THE VERSION NUMBER

1. Hold down the CH1 and CH2 ANTI-FEEDBACK SWEEP buttons (red buttons) and turn on the power to the unit.
2. After all of the panel LEDs flash, the version is indicated in the LEVEL LED.

Version	LEVEL MATER L					LEVEL MATER R				
	-24dB	-12dB	-6dB	-3dB	0dB	-24dB	-12dB	-6dB	-3dB	0dB
1.0	o	x	x	x	x	x	x	x	x	x
1.1	o	x	x	x	x	o	x	x	x	x
1.2	o	x	x	x	x	o	o	x	x	x
1.3	o	x	x	x	x	o	o	o	x	x
1.4	o	x	x	x	x	o	o	o	o	x
1.5	o	x	x	x	x	o	o	o	o	o
1.6	o	x	x	x	x	x	o	o	o	o
1.7	o	x	x	x	x	x	x	o	o	o
1.8	o	x	x	x	x	x	x	x	o	o
1.9	o	x	x	x	x	x	x	x	x	o
2.0	o	o	x	x	x	x	x	x	x	x
3.0	o	o	o	x	x	x	x	x	x	x

o:light  
x:dark

## TEST MODE

### Items Required

- 2 BOSS FS-5U foot switches (optional, sold separately)
- Foot switch connector cable (PHONE-PHONE)
- Blank plug
- Expression pedal

### Entering Test Mode

1. Set the unit as follows.

#### [CONNECTING]

Connect the foot switch to ANTI-FEEDBACK SWEEP (CH1,CH2).



Set the FS-5's POLARITY switch to the JACK setting.

#### [SETTING OF PANEL]

The name of sw or Vol	situation
POWER SW	OFF
CH1-CH4 INPUT SELECT	LINE
CH1-CH2 VOICE ENHANCER	OFF
LOW BOOST	OFF
WIDE	OFF
CH1-CH4 ANTI-FEEDBACK	OFF
CH3-CH4 PHANTOM	OFF
ALL VOLUME	Minimums

2. Hold down the FS-5U connected to the ANTI-FEEDBACK SWEEP (CH1) jack and turn on the power to the unit.
3. Within 4 seconds, press the FS-5U connected to the ANTI-FEEDBACK SWEEP (CH1) jack twice.  
At this time, all of the panel LEDs flash.  
The program version is indicated by the MASTER LED's lit/off status.

### Exiting Test Mode

Turn off the power to exit Test Mode.

### Skipping

Test categories cannot be skipped.

### Test Items

1. SPU/DSP/SENSOR Test
2. Switch Test
3. Volume Test

## 6. Test Category Details

### 1. CPU/DSP/SENSOR Test

Press the FS-5U connected to the ANTI-FEEDBACK SWEEP CH2 jack. The CPU/DSP/SENSOR test begins automatically.

The progress of the test is indicated with the MASTER LEVEL LEDs, with test progress corresponding to the LEDs lighting in the following sequence: L -24(dB) -> L 0(dB) -> R -24(dB) -> R -0(dB)

#### If the test passes

The LEDs appear as follows.

LED name	state
SUBWOOFER ACTIVE LED	blink
LEVEL MASTER L 0dB	light
LEVEL MASTER R 0dB	light

#### If the test fails

All of the LEVEL MASTER LEDs flash.

In addition to this, the LED corresponding to the point of failure lights or flashes as indicated below.

Details of Points of Failure

Error	discription
CPU-DSP communication error	CH1 MIC LED is lit
DSP error	CH2 MIC LED is lit
DSP-DRAM communication error	CH3 MIC LED is lit
CPU-DSP interrupt line error	CH4 MIC LED is lit
SENSOR error	all LEDs is blinked

If the test passes, the procedure automatically advances to the next test.

## 2. Switch Test

Functioning of the buttons, slide switches, and jacks is indicated when the corresponding LEDs light as shown below.

### [BUTTON]

Press the buttons.

1	CH1 INPUT SELECT SWITCH	CH1 MIC LED lights
2	CH1 VOICE ENHANCER SWITCH	CH1 LINE LED lights
3	CH1 ANTI-FEEDBACK ON/OFF SWITCH	CH1 ANTI-FEEDBACK ON/OFF LED lights
4	CH1 ANTI-FEEDBACK SWEEP SWITCH	CH1 ANTI-FEEDBACK SWEEP LED lights
5	CH2 INPUT SELECT SWITCH	CH2 MIC LED lights
6	CH2 VOICE ENHANCER SWITCH	CH2 LINE LED lights
7	CH2 ANTI-FEEDBACK ON/OFF SWITCH	CH2 ANTI-FEEDBACK ON/OFF LED lights
8	CH2 ANTI-FEEDBACK SWEEP SWITCH	CH2 ANTI-FEEDBACK SWEEP LED lights
9	CH3 INPUT SELECT SWITCH	CH3 MIC LED lights
10	CH4 INPUT SELECT SWITCH	CH4 MIC LED lights
11	LOW BOOST SWITCH	CH3 LINE LED lights
12	WIDE SWITCH	CH4 LINE LED lights

### [Slide Switches]

13	CH4 PHANTOM SWITCH (OFF→ON)	LEVEL METER L -24dB LED lights
14	CH3 PHANTOM SWITCH (OFF→ON)	LEVEL METER L -12dB LED lights

### [JACK]

Insert and remove the blank plug.

15	SPEAKER JACK	LEVEL METER L -6dB LED lights
16	STEREO LINK OUT R JACK	LEVEL METER L -3dB LED lights
17	STEREO LINK OUT L JACK	LEVEL METER L 0dB LED lights
18	STEREO LINK IN JACK	LEVEL METER R -24dB LED lights

Connect the expression pedal.

19	EXP PEDAL JACK	LEVEL METER R -12dB LED lights
----	----------------	--------------------------------

Remove the plug from the jack.

20	ANTI-FEEDBACK SWEEP CH2 JACK	LEVEL METER R -6dB LED lights
21	ANTI-FEEDBACK SWEEP CH1 JACK	LEVEL METER R -3dB LED lights LEVEL METER R 0dB LED lights

Connect the pedal to the ANTI-FEEDBACK SWEEP CH1/CH2 jacks.

If all switch and jack tests pass, the procedure advances automatically to the Volume test.

## 3. Volume Test

- Set the expression pedal to minimum volume.
- Adjust the volume control; the volume level should change accordingly, with a rectangular wave being output.
- Adjust the following volume level controls, changing from MIN to CENTER to MAX, and confirm with the LEDs that the controls are functioning properly.
  - MASTER
  - EQUALIZER HIGH, EQUALIZER MIDDLE, EQUALIZER LOW (WITH CENTER CLICK)
  - ~~CH1 REVERB/DELAY, CH2 REVERB/DELAY~~
  - ~~CH3 REVERB, CH4 REVERB~~
  - CH4 REVERB, CH3 REVERB
  - CH2 REVERB/DELAY, CH1 REVERB/DELAY

## LED Display

Position of Knob	LEVEL METER	
	L 0dB	R 0dB
(1) "0", "-" or OFF	o	x
(2) "CENTER" or "0"	o	o
(3) "10" or "+"	x	x
	o:light	
	x:dark	

- Adjust the expression pedal from minimum to maximum and then to minimum and maximum again.  
The LEVEL LED should change in accordance with the value for the volume at each point in time.

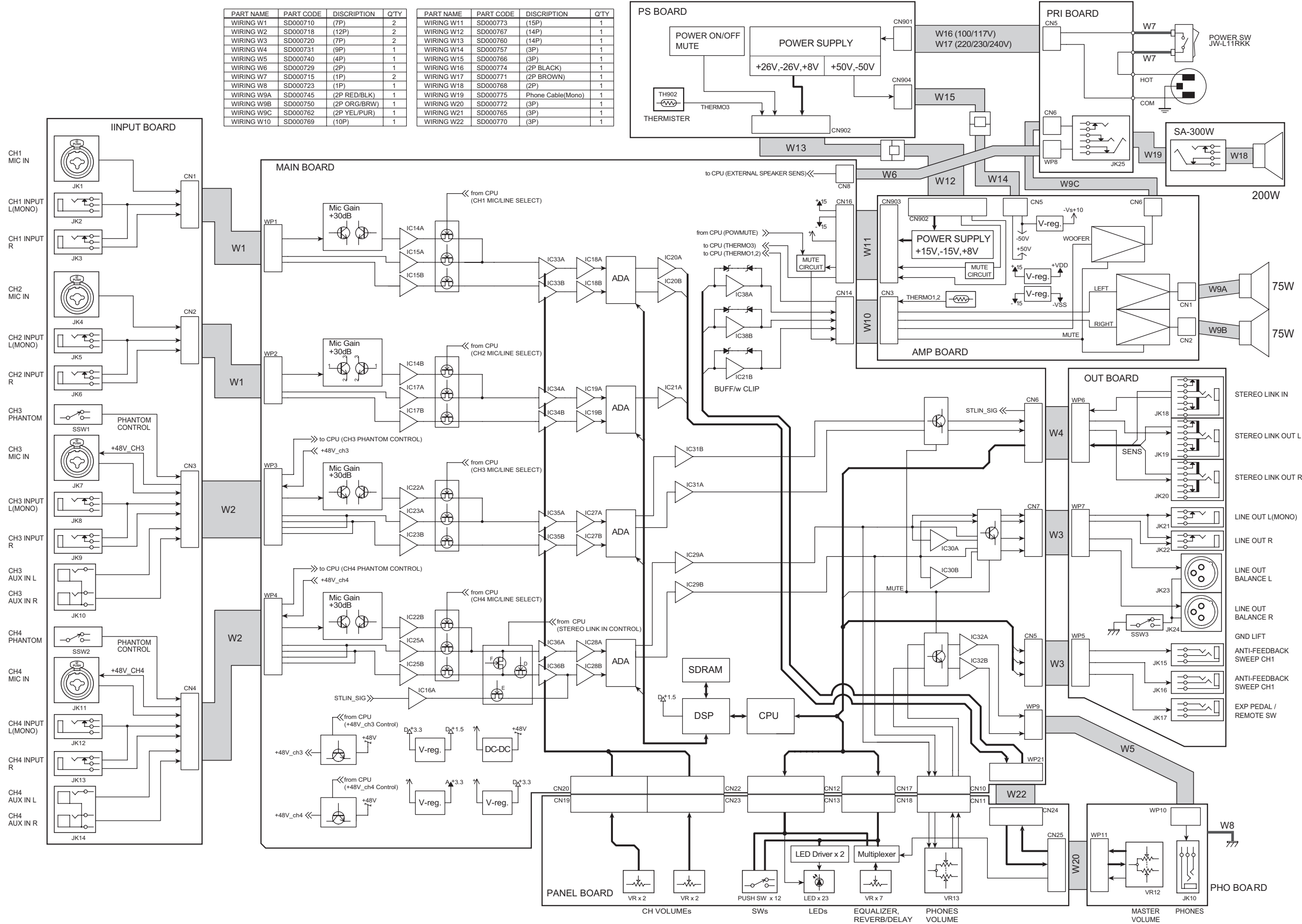
## 4. END

ALL the LINE LED from CH1+CH4 are lit.

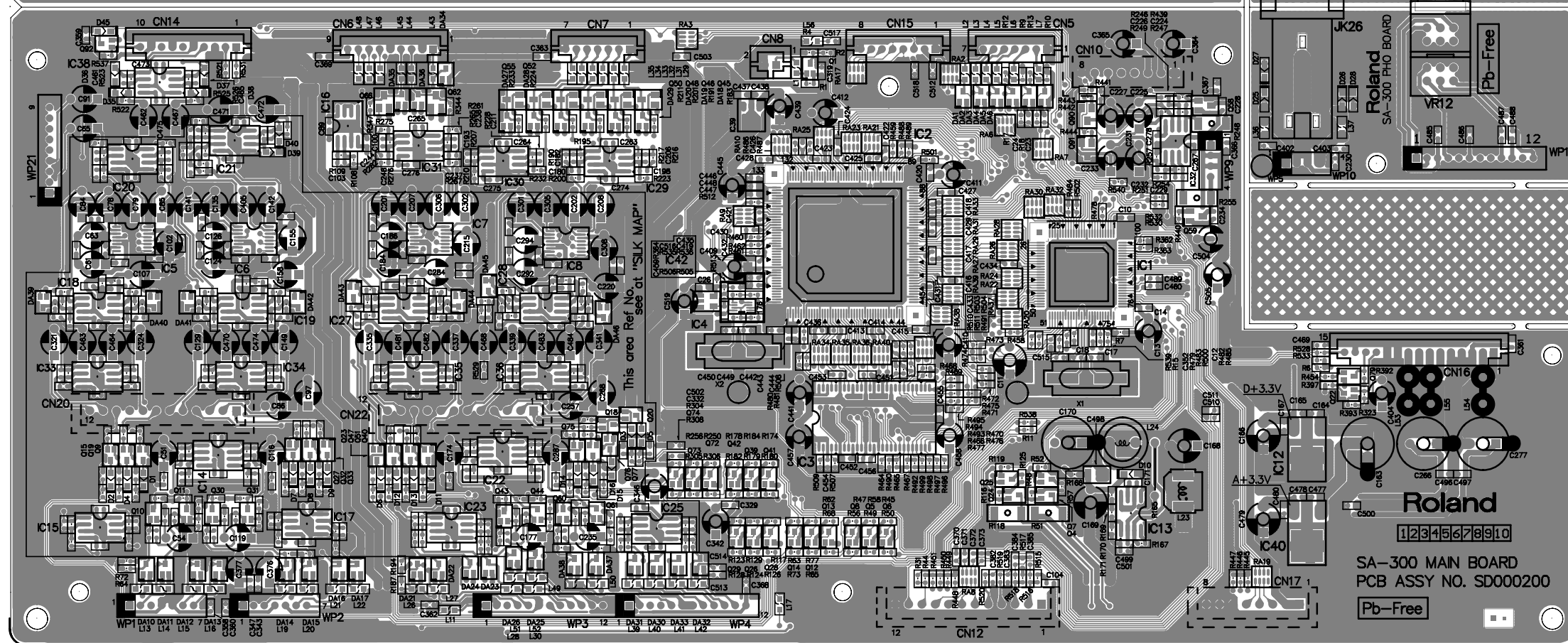
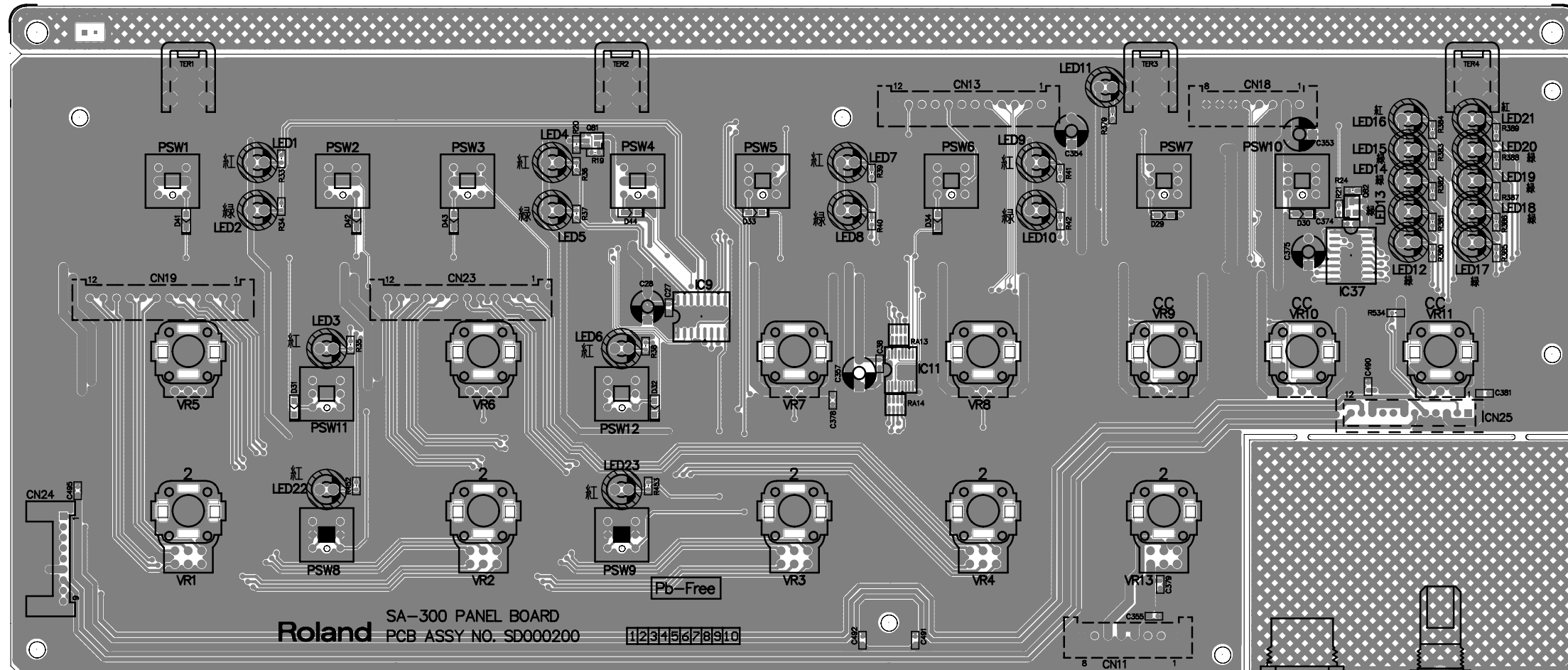
THE TEST MODE is finished.

# BLOCK DIAGRAM

PART NAME	PART CODE	DISCRIPTION	QTY	PART NAME	PART CODE	DISCRIPTION	QTY
WIRING W1	SD000710	(7P)	2	WIRING W11	SD000773	(15P)	1
WIRING W2	SD000718	(12P)	2	WIRING W12	SD000767	(14P)	1
WIRING W3	SD000720	(7P)	2	WIRING W13	SD000760	(14P)	1
WIRING W4	SD000731	(9P)	1	WIRING W14	SD000757	(3P)	1
WIRING W5	SD000740	(4P)	1	WIRING W15	SD000766	(3P)	1
WIRING W6	SD000729	(2P)	1	WIRING W16	SD000774	(2P BLACK)	1
WIRING W7	SD000715	(1P)	2	WIRING W17	SD000771	(2P BROWN)	1
WIRING W8	SD000723	(1P)	1	WIRING W18	SD000768	(2P)	1
WIRING W9A	SD000745	(2P RED/BLK)	1	WIRING W19	SD000775	Phone Cable(Mono)	1
WIRING W9B	SD000750	(2P ORG/BRW)	1	WIRING W20	SD000772	(3P)	1
WIRING W9C	SD000762	(2P YEL/PUR)	1	WIRING W21	SD000765	(3P)	1
WIRING W10	SD000769	(10P)	1	WIRING W22	SD000770	(3P)	1

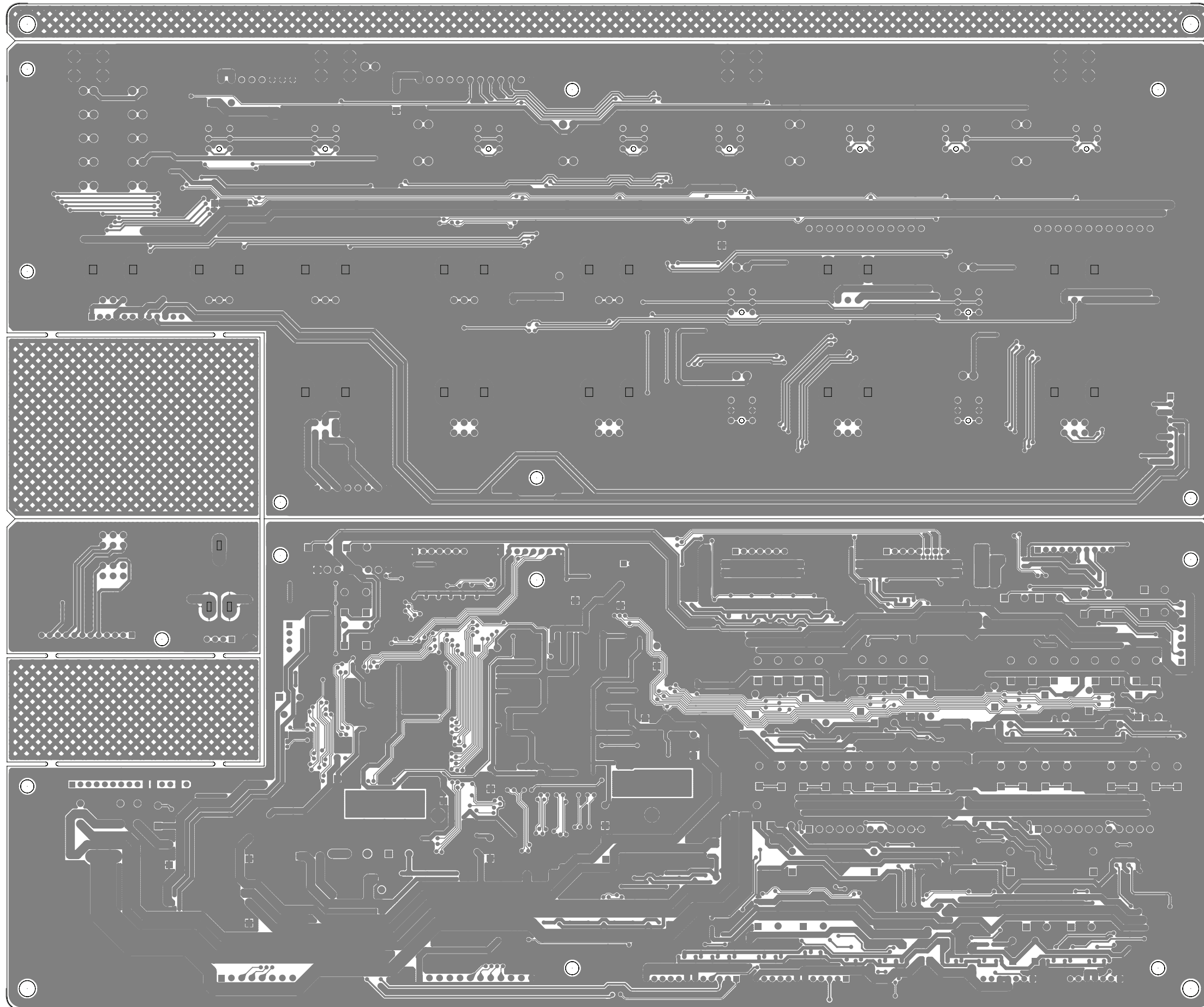


# CIRCUIT BOARD(MAIN 1/2)

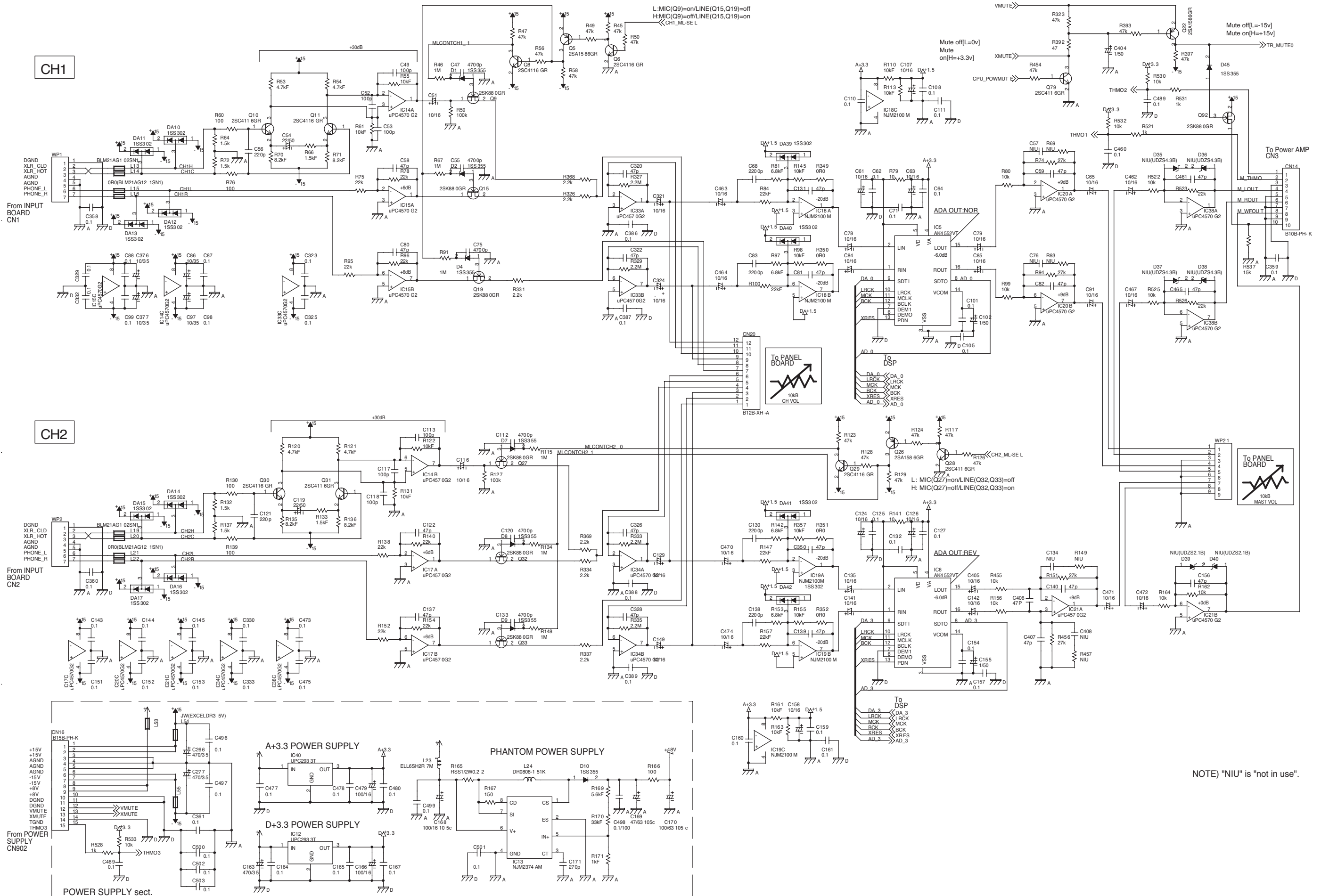




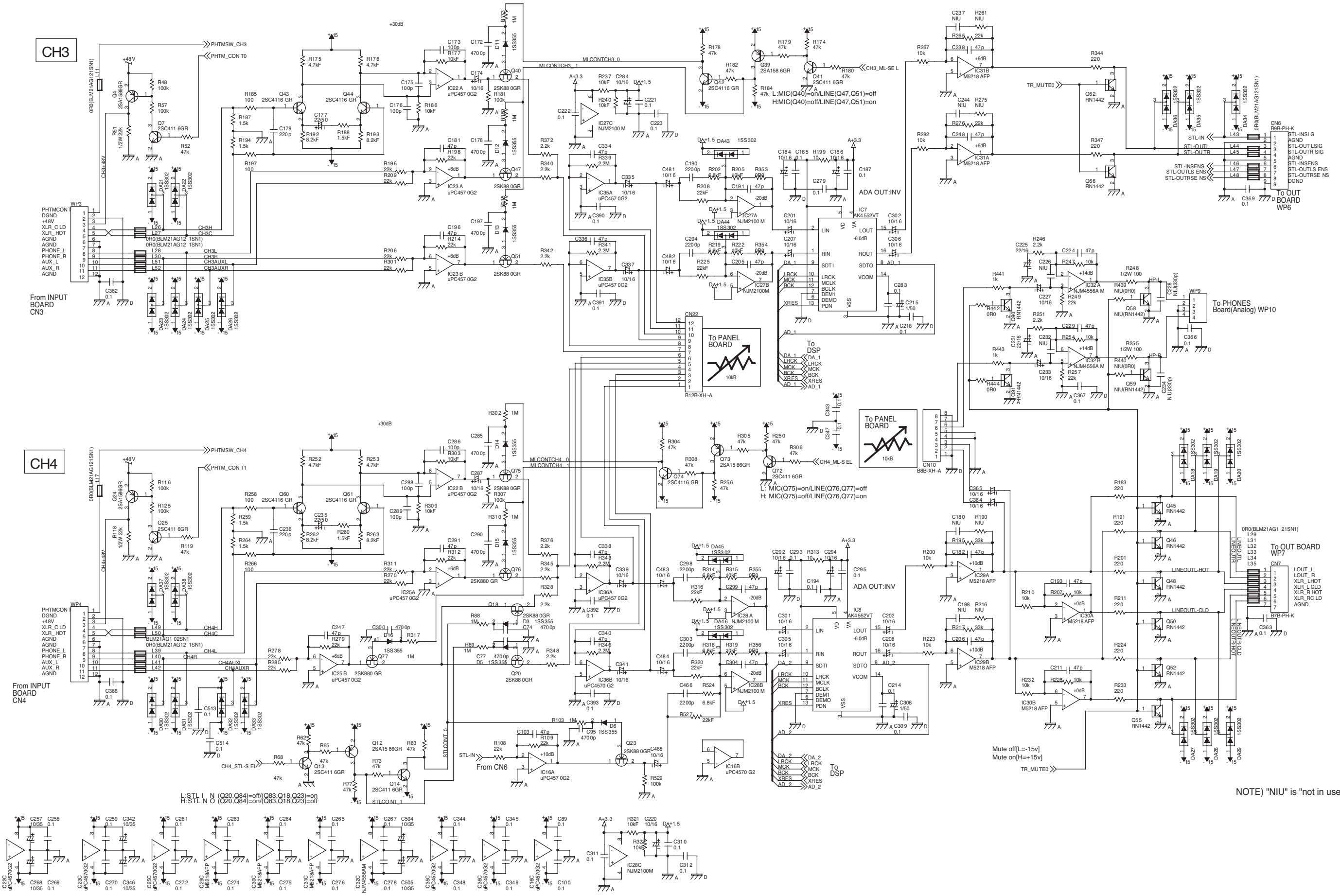
# CIRCUIT BOARD(MAIN 2/2)



# CIRCUIT DIAGRAM(MAIN CH1,2)

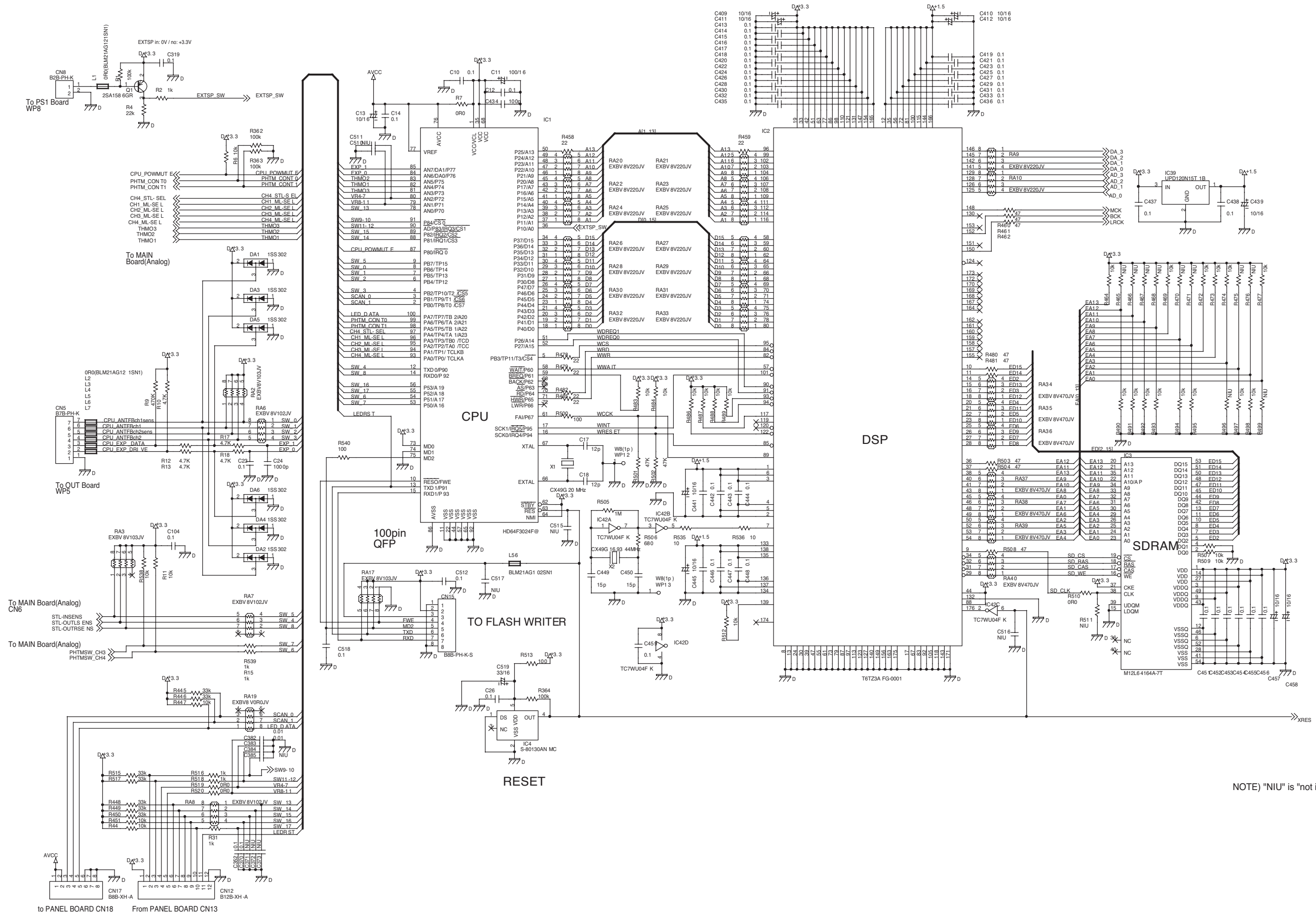


# CIRCUIT DIAGRAM(MAIN CH3,4)



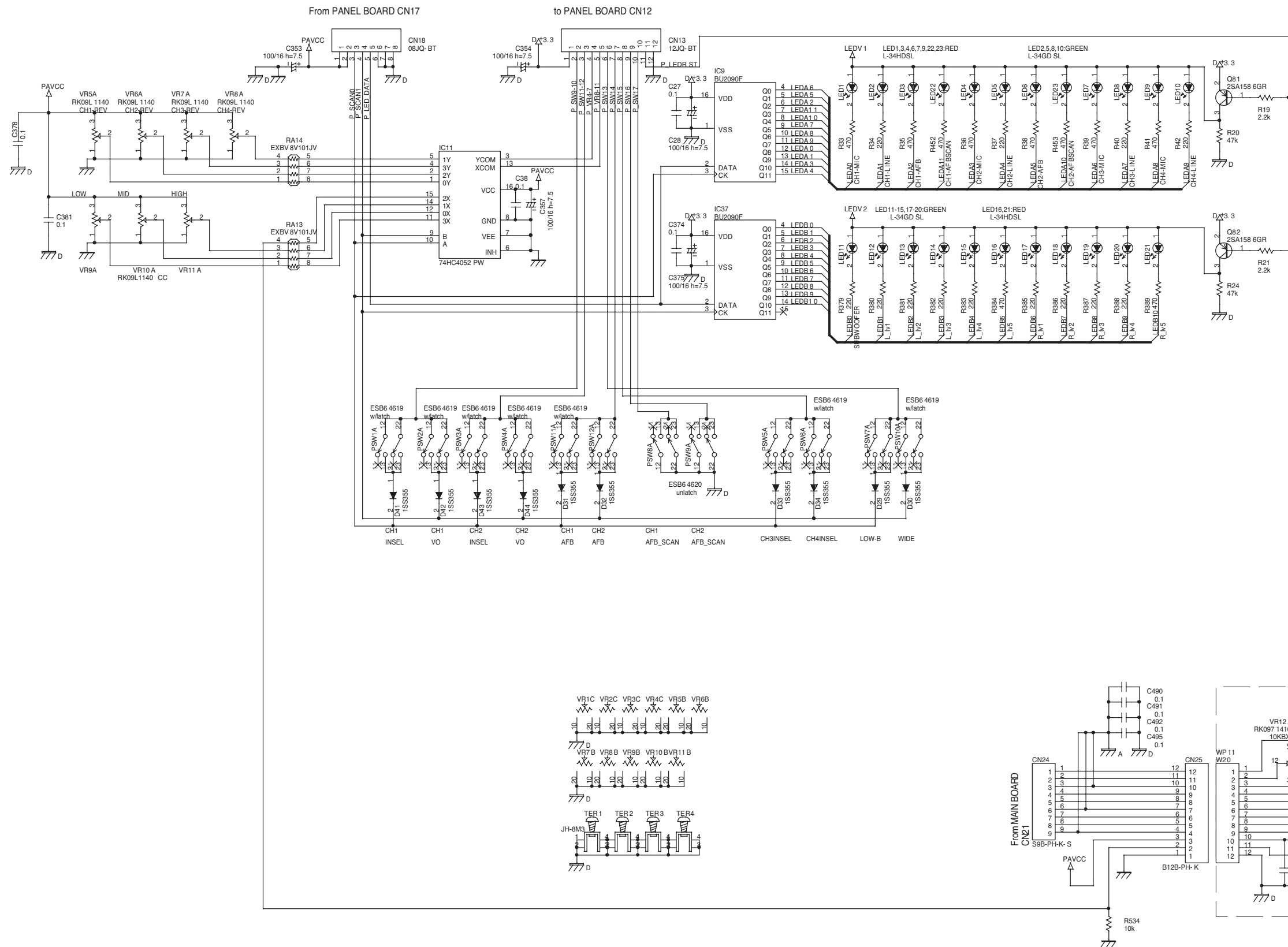
NOTE "NIU" is "not in use".

# CIRCUIT DIAGRAM(CPU)

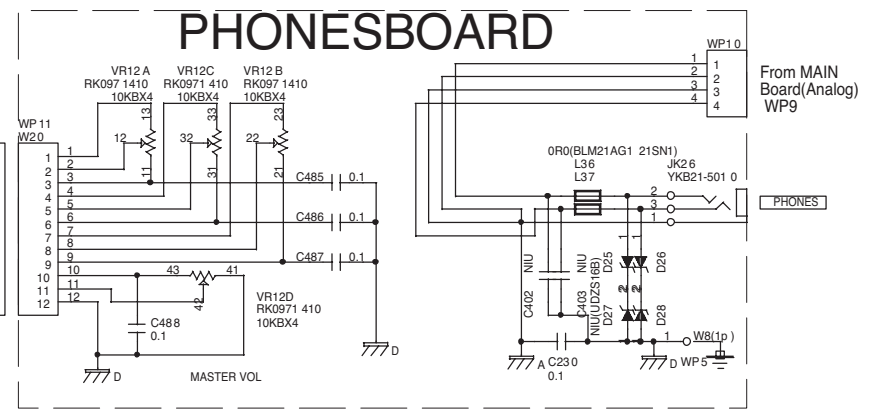
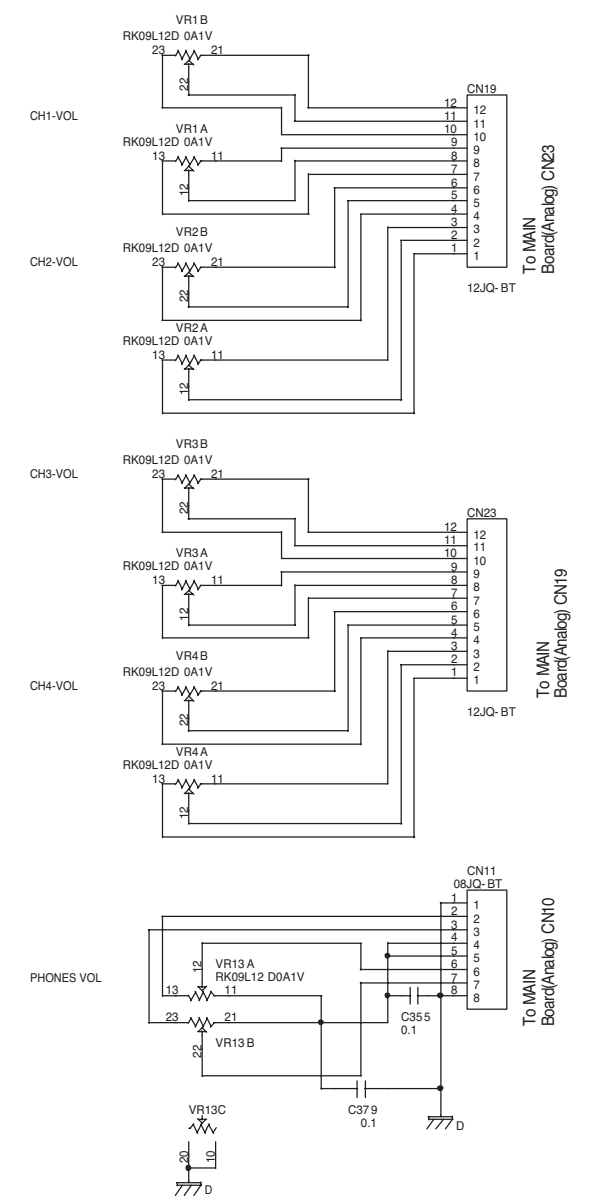


NOTE) "NIU" is "not in use".

# CIRCUIT DIAGRAM(PANEL)

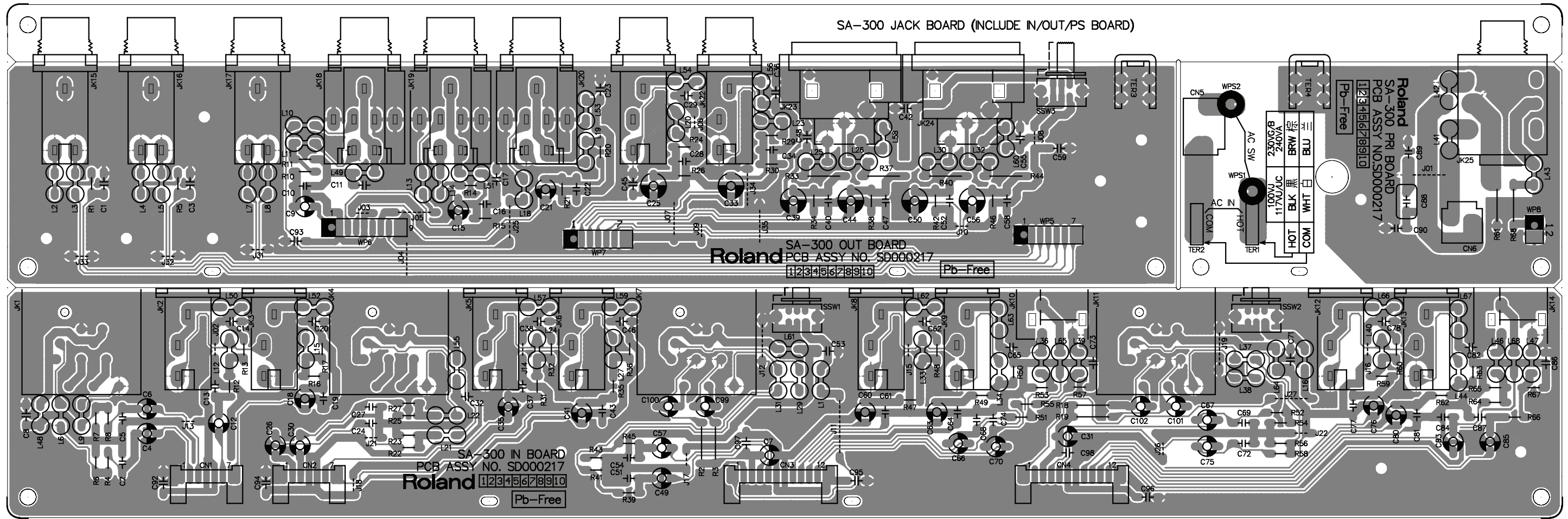


## - Analog Section



NOTE) "NIU" is "not in use".

# CIRCUIT BOARD(JACK)



# CIRCUIT DIAGRAM(JACK)

